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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,227	09/29/2003	Andrew D. Kurtz	46001	1892

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CHURCH & DWIGHT CO., INC.  
LAW DEPT. - PATENTS  
469 NORTH HARRISON STREET  
PRINCETON, NJ 08543-5297

EXAMINER
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VANOY, TIMOTHY C

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/674,227

Applicant(s)

KURTZ, ANDREW D.

Examiner

Timothy C. Vanoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                             |                                                                                         |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____                                                |

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## DETAILED ACTION

### *Oath/Declaration*

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because the new oath or declaration does not properly identify the application of which it is to form a part, **preferably by application number and filing date in the body of the oath or declaration.** See MPEP §§ 602.01 and 602.02.

The C-I-P oath does not contain a reference to the parent application and is, therefore, objected to.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 7 is again rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent 6,428,759 B1 to Smith et al.

The Smith patent discloses a process for producing sodium bicarbonate (please see col. 10 lines 7-9), comprising:

Dissolving a sodium bicarbonate trona ore in a solution to form a brine;

Neutralizing the brine;

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Dissolving calcined trona in said neutralized brine to form a feed liquor;

Introducing the feed liquor into a sodium carbonate monohydrate crystallizer  
(please see claims 1 and 2 in U. S. Patent 6,428,759);

Sending the monohydrate mother liquor purge stream to a sodium decahydrate crystallizer (please see col. 9 lines 58-59);

Melting the sodium carbonate decahydrate crystals to produce a solution containing about 30% by weight of sodium carbonate (please see col. 9 line 67 to col. 10 line 5), and

Carbonating the solution formed by melting the crystals to produce sodium bicarbonate, which can be separated and recovered as a product (please see col. 10 lines 7-10).

Please note that it would be inherent that the total amount of waste water from the production of sodium bicarbonate and also from the production of sodium carbonate decahydrate would be less than the amount of effluent stream from the production of sodium carbonate due to mass balance.

Also, please note that the same sodium bicarbonate from the same process will inherently have the same purity.

### ***Response to Arguments***

Applicants' arguments submitted with the amendment filed on June 5, 2006 have been fully considered but they are not persuasive.

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a) *The applicant argues that Smith (U. S. Patent 6,428,759) is directed to the production of sodium carbonate from trona, however the applicant's process starts with a waste stream containing sodium carbonate. Such a waste stream might flow away from Smith's production facility.*

The applicant's process starts with solution-mined trona, and converts this trona into sodium carbonate with the concomitant production of a first waste water effluent stream. U. S. Patent 6,428,759 B1 also starts with trona and converts this trona into sodium carbonate monohydrate crystals with the concomitant production of a "monohydrate mother liquor purge stream" (which is not seen to be distinct from the applicant's "first waste water effluent stream"): please see claims 1 and 2 and also col. 9 lines 58-59 in U. S. patent 6,428,759 B1. Thus, no difference has been shown between the applicant's process and the process of U. S. Patent 6,428,759 B1.

b) *The applicant argues that Smith teaches how to get rid of or eliminate problematic bicarbonate in stark contrast to the applicant who is making bicarbonate.*

U. S. Patent 6,428,759 B1 is also making bicarbonate: please see col. 10 lines 7-10 in U. S. Patent 6,428,759 B1.

c) *The applicant argues that Smith's solution mined liquor contains unwanted bicarbonate but is relatively clean. Applicant's raw material is heavily contaminated with undesirable substances.*

The "raw material" of the applicants' claims and the "raw material" in the process of U. S. Patent 6,428,759 is the same: trona. The same trona will inherently be contaminated with the same impurities to the same degree. The same "first waste-

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water effluent stream" from the same sodium carbonate production facility will inherently have the same degree of "cleanness" as the same "monohydrate mother liquor purge stream" mentioned in col. 9 lns. 58-59 in U. S. Patent 6,428,759. Thus, no difference has been shown between the applicant's claimed process and the process described in U. S. Patent 6,428,759.

d) *The applicant argues that he makes pure bicarbonate from a highly compromised, dirty starting material, whereas Smith makes bicarbonate by using purified carbonate (soda ash) as his starting material.*

Both the applicant and Smith are making the same bicarbonate from the same starting material: trona (please compare claims 1 and 2 in U. S. Patent 6,428,759 to applicant's claim 7). The same trona will inherently be contaminated to the same degree.

Applicants' arguments filed on Sept. 29, 2006 have been fully considered but they are not persuasive.

a) *The applicant argues that his claim 1 is limited to "whereby the total amount of effluent waste-water in the two aforesaid downstream waste water effluent streams is less than the amount of the effluent waste water in said first waste water effluent stream". Smith et al. does not teach or discuss that the total downstream waste-water effluent is less than the amount of effluent waste water from sodium carbonate production. Nevertheless, the examiner contends that inherently "the total amount of waste water from the production of sodium bicarbonate and also from the production of*

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*sodium carbonate decahydrate would be less than the amount of effluent stream from the production of sodium carbonate due to mass balance” Applicant respectfully disagrees. Inherent anticipation requires that the missing descriptive material is ‘necessarily present’, not merely probably or possibly present. See Rosco Inc. vs. Mirror Lite Company, 64 USPQ 2d 1676 (CAFC 2002). Thus, the mere fact that waste water effluent streams from potential downstream steps may result in less total waste water effluent than from sodium carbonate production is not sufficient.*

The argument is not persuasive because the limitation “whereby the total amount of effluent waste-water in the two aforesaid downstream waste water effluent streams is less than the amount of the effluent waste water in the said first waste water effluent stream” necessarily occurs in the process of U. S. Patent 6,428,759 B1 to Smith et al. due to mass balance.

b) *The applicant argues that there is no discussion in Smith et al. that the waste-water effluent stream from sodium carbonate production differs from those of potential downstream production steps.*

No distinction is seen or has been shown between the applicants’ waste water effluents and the waste water effluents of U. S. Patent 6,428,759 B1.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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*Timothy C Vandy*  
Timothy C Vandy  
Primary Examiner  
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